



RECEIVED  
NOV 19 2003  
TECH CENTER 1600/2900

FIGURE 1A

```
SEQ ID NO:39  MVYHVRPKHAL-----FLAFYCYFS-----
SEQ ID NO:40  MKATLAAPSSLTSL-P-----YRTNSS-FGSKSLLFRSPSSSSVS-MTTTRGNV
SEQ ID NO:38  MAN-----SXRPA-PLTPLHRLDAAPPRLCHAARPVPRPVLPLPAR-XLRAPDGV
SEQ ID NO:28  MATVURI-----PTISCIHIHIFRSQSPRTFARIRVGPRSWAPIRASA-ASSERGEI
SEQ ID NO:08  MATVURI-----PTISCIHIHIFRSQSPRTFARIRVGPRSWAPIRASA-ASSERGEI
SEQ ID NO:22  MAHAALLHCSQSSR-SLAACRRGSHYRAPH-VPRHSRRLRRVVSL---R-PMASSTA-
SEQ ID NO:24  AR--VQPTGALAPLHPLLRCTSRHLCASASPRAGLCLHHHRRRRSSRRTKLAVRAMAPT
SEQ ID NO:26  FRH-----GH-----AL-----
1
60

SEQ ID NO:39  LLTMASATIASADLYEKIKNFYDDSSGLWEDVWGEHMHGYYGPHGTYRI---DRRQAQI
SEQ ID NO:40  AVAAAAATSTEA--LRKGIAEFYNETSGLWEEIWGDHMHGIFYDPDSSVQLSDSGHKEAQI
SEQ ID NO:38  VDRGPGDAAPPGLKEGIAGLYDESSGLWESIWGEHMHGIFYDSGEAASMSD--HRRRAQI
SEQ ID NO:28  VLEQPKKDDKKLQKGIAEFYDESSGLWENIWGDHMHGIFYDSTVSLSD--HRAAQI
SEQ ID NO:08  VLEQPKKDDKKLQKGIAEFYDESSGLWENIWGDHMHGIFYDSTVSLSD--HRAAQI
SEQ ID NO:22  ---QAPATAPPGLKEGIAGLYDESSGLWENIWGDHMHGIFYDSSEAASMD--HRRRAQI
SEQ ID NO:24  LSSSSTAAPPGLKEGIAGLYDESSGVWESIWGEHMHGIFYDAGEAASMSD--HRRRAQI
SEQ ID NO:26  -----
61
120

SEQ ID NO:39  DLIKELLAWAVPQNSA---KPRKILDGCGIGGSSLYLAQQHQAQAEVMGASLSPQVERA
SEQ ID NO:40  RMIEESLRFAGVTDEEE-EKKIKKVVDVCGGIGGSSRYLASKFGAECIGITLSPVQAKRA
SEQ ID NO:38  RMIEEALAFAAVP--DDPTNPKPTIVDVCGGIGGSSRYLANKYGAQCSGITLSPVQAERG
SEQ ID NO:28  RMIQESLRFASV--SEERSKWPKSIVDVCGGIGGSSRYLAKKFGATSVGITLSPVQAQRA
SEQ ID NO:08  RMIQESLRFASV--SEERSKWPKSIVDVCGGIGGSSRYLAKKFGATSVGITLSPVQAQRA
SEQ ID NO:22  RMIEEALAFAGVPASDDPEKTPKTIVDVCGGIGGSSRYLAKKYGXQCTGITLSPVQAERG
SEQ ID NO:24  RMIEESLAF-----
SEQ ID NO:26  -----
121
180
```



RECEIVED  
NOV 19 2003  
TECH CENTER 1600/2900

FIGURE 1B

SEQ ID NO: 39	GERARALGLGSTCQFQVANALDLPFASDSFDWVWSLESGEHMPNKAQFLQEAWRVLKPGG	
SEQ ID NO: 40	NDLAAAQSLSHKASFQVADALDQPFEDGKFDLVWSMESGEHMPDKAKFVKELVRVAAPGG	
SEQ ID NO: 38	NALAAAQGLSDKASFQVADALEQFPDQGFDLVWSMESGEHMPNKKFVSELARVAAPGA	
SEQ ID NO: 28	NALAAAQGLADKVSFQVADALQPFSDGQFDLVWSMESGEHMPDKAKFVGELARVAAPGA	
SEQ ID NO: 08	NALAAAQGLADKVSFQVADALQPFSDGQFDLVWSMESGEHMPDKAKFVGELARVAAPGA	
SEQ ID NO: 22	NALAAAQGLSDQVTIQVADALEQFPDQGFDLVWSMESGEHMPDKRKFVSELARVAAPGG	
SEQ ID NO: 24	-----	
SEQ ID NO: 26	-----AQFPDQGFDLVWSMESDEHMPDKRQFVSELARVAAPGA	240
	181	
SEQ ID NO: 39	RLILATWCHRPIDPGNGPLTADERRHLQAIYDVVCLPYVVSPLPDYEAIARECGFGEIKTA	
SEQ ID NO: 40	RIIIVTWCHRNLSAGEEALQPWEQNILDKICTFYLPAWCSTDDYVNLQSHSLQDIKCA	
SEQ ID NO: 38	TIIIVTWCHRNLPSEDSLKPDELNLLKKICDAYYLPDWCSPSDYVVKIAESLSLEDIKTA	
SEQ ID NO: 28	IIIIVTWCHRDLPDEQSLHPWEQDLLKKICDAYYLPAWCSTSDYVVKLLQSLSLQDIKSE	
SEQ ID NO: 08	IIIIVTWCHRDLPDEQSLHPWEQDLLKKICDAYYLPAWCSTSDYVVKLLQSLSLQDIKSE	
SEQ ID NO: 22	TIIIVTWCHRNLPSETSLKPDELSLLRRICDAYYLPDWCSPSDYVVKIAESLSLEDIKTA	
SEQ ID NO: 24	-----	
SEQ ID NO: 26	RIIIVTWCHRNLEPSEESLKPDELNLLKKICDAYYLPDWCSPSDYVVKIAESLSLEDIRTA	300
	241	
SEQ ID NO: 39	DWSVAVAPFWDRIEAFDPRVLWALGQAGPKIINAAALCLRLMKWYERGLVRFGLLTGI	
SEQ ID NO: 40	DWSENVAPFPWPAVIRALTWKGLVSLLRSGMKSIKALTMPMLMIEGYKKGVIKFGIITCQ	
SEQ ID NO: 38	DWSENVAPFPWPAVIRQSAITWKGLTSLLRSGWKTIKGALVMPMLIQGYKKGLIKFSIITCR	
SEQ ID NO: 28	DWSRFVAPFPWPAVIRSAFTWKGLSLLSSGQTKIKGALAMPMLMIEGYKKDLIKFAIITCR	
SEQ ID NO: 08	DWSRFVAPFPWPAVIRSAFTWKGLSLLSSGKLGI-----YIAFQKQTPPSSIATCK	
SEQ ID NO: 22	DWSENVAPFPWPAVIRKSAITWKGLTSLTTGWKTIRGAMVMPMLIQGYKKGLIKFTIITCR	
SEQ ID NO: 24	-----	
SEQ ID NO: 26	DWSENVAPFPWPAVIRKSAITWKGLTSLLRSGWETVRGAMVMPMLVIEGYKKGLIKFPPIITCR	360
	301	



Title: Plant Vitamin E Biosynthetic Enzymes  
Inventor: Rebecca E. Cahoon et al.  
Application: 09/857,613  
Docket: BB-1289  
REPLACEMENT DRAWING SHEET

RECEIVED  
NOV 19 2003  
TECH CENTER 1600/2900

FIGURE 1C

SEQ ID NO:39	KPLV-----	361	380
SEQ ID NO:40	KPL-----		
SEQ ID NO:38	KPQAAIEGEPEAAPSVE.-		
SEQ ID NO:28	K-----PE.-		
SEQ ID NO:08	SYVTDHYFTR.-		
SEQ ID NO:22	KPGAA-.MA-----HAALLHC		
SEQ ID NO:24	-----		
SEQ ID NO:26	KPETT-----Q.-		



RECEIVED  
NOV 19 2003  
RECEIVED 1600/2900

FIGURE 2A

SEQ ID NO:41 MPPTPTTAAATGAAAAVTPEHARPH-----RMVRFNPRSDRFTHTLSFHHVEFWCADAASA  
SEQ ID NO:43 MGHQNAAVSENONHDDGAASSPGFKLVGFSKFRKNPKSDKFKVKRFFHHIEFWCGDATNV  
SEQ ID NO:42 MGKKQSEAEILSS-NSSNTSPATFKLVGFNNFVRANPKSDHFAVKRFFHHIEFWCGDATNT  
SEQ ID NO:36 MPIPMCNEIQQA-QAQAQAQPGFKLVGFKNFVRTNPKSDRQVNRFFHHIEFWCTDATNA  
SEQ ID NO:38 MPPTPTTAAATGAAA-VTPEHARPR-----RMVRFNPRSDRFTHTLAFHHVEFWCADAASA  
SEQ ID NO:32 MGK-QTTTSATAA-DGSKDAHAEEFKLVGFKNFVRTNPKSDHFCVHRFFHHIEFWCGDATNT  
1 60

SEQ ID NO:41 AGRFAFALGAPLAARSDLSSTGNSAHASQLLRSGSLAFLFTAPYANG-----CDAATASL  
SEQ ID NO:43 ARRFWSWGLGMRFSAKSDDLSTGNMVHASLYLLTSGDLRFLFTAPYSPSLSAGEIKPTTTASI  
SEQ ID NO:42 SRRFSWGLGMPPLVAKSDDLSTGNSVHASLYLRSANLSFVFTAPYSPSTTTSS-G---SAAI  
SEQ ID NO:36 SRRFSWGLGMPPIVAKSDDLSTGNQIHASLYLLRSGDLSFLFSAPYSPSLSAGS-SAASSASI  
SEQ ID NO:38 AGRFAFALGAPLAARSDLSSTGNSVHASQLLRSGNLAFLLFTAPYANG-----CDAATASL  
SEQ ID NO:32 AKRFSWGLGMPPLVAKSDDLSTGNSAHASLYLLRSGELNFLTSPYSPSISAPS-----SAAI  
61 120

SEQ ID NO:41 PSFSADAARRFSADHGIAVRSVALRVADAAEAFAFRSRRRGARPAFAPVDLGRGFA-FAEV  
SEQ ID NO:43 PSFDHGSCRSFFSSHGLGVRAVAIEVEDAESAFSISVANGAIPSSPPIVLNEAVT-IAEV  
SEQ ID NO:42 PSFSASGFHSFAAKHGLAVRAIALEADVAAAFAEASVARGARPAAPVEL-DDQAWLAEV  
SEQ ID NO:36 PSFDAATCLAFAAKHGFGVRAIALEVADAAEAFAFSAVAKGAEPASPPV-LVDDRTGFAEV  
SEQ ID NO:38 PSFSADAARQFSADHGLAVRSIALRVADAAEAFAFASVDGGARPAFSPVDLGRGFG-FAEV  
SEQ ID NO:32 PSFSFSTYQSFTSSHGLAVRAVAIQVDSAFSAYSASISRGAKPVSAPIILLSDNKTAIAEV  
121 180



RECEIVED  
Nov 19 2003  
TECH CENTER 1600/2900

FIGURE 2B

SEQ ID NO: 41	ELYGDVWVLRVFSH-PDGTDP-----FLPGFEGVTNPDA---VDYGLTRFDHVVGNV	240
SEQ ID NO: 43	KLYGDVWVLRVVS YKAEDTEKSE-----FLPGFERVEDASSFP-LDYGIRRLDHA VGNVP	
SEQ ID NO: 42	ELYGDVWVLRVVSFGRE-----EGLFLPGFEAVEGTASFDDLDY GIRRLDHA VGNVT	
SEQ ID NO: 36	RLYGDVWVLRVVS YKDAAPQAPHADPSRWFLPGFEAAASSSFPELDY GIRRLDHA VGNVP	
SEQ ID NO: 38	ELYGDVWVLRVFSH-PDGRDVP-----FLPGFEGVSNPDA---VDYGLTRFDHVVGNV	
SEQ ID NO: 32	HLYGDSVLRVVS YGDNG-----TGPDGWFLLPGFEPVDDQMSYKELDY GIRRLDHA VGNVP	181
		241
SEQ ID NO: 41	ELAPAAAYIAGFTGFHFEFAEFTAEDVGTTEGLNSVVLANNSEGVLLPLNEPVHGTKR	
SEQ ID NO: 43	ELGPALTYVAGFTGFHQFAEFTADDVGTAEGLNSAVLASNDEMVLPLINEPVHGTKR	
SEQ ID NO: 42	ELGPVVEYIKGFTGFHFEFAEFTAEDVGTLEGLNSVVLANNSEMVLLPLNEPVYGTKR	
SEQ ID NO: 36	ELAPAVRYLKGFSGFHFEFAEFTAEDVGTSEGLNSVVLANNSETVLLPLNEPVYGTKR	
SEQ ID NO: 38	ELAPAAAYVAGFTGFHFEFAEFTTEDVGTAEGLNSMVLANNSEGVLLPLNEPVHGTKR	
SEQ ID NO: 32	ELGPVVDYLLKFTGFHFEFAEFTSEDVGTAEGLNSMVLANNNENVLLPLNEPVFGTKR	241
		300
SEQ ID NO: 41	QIQTFLEHHGGPGVQHIAVASSDVLRTLRLKMRARSAMGGFDLPPPLPKYYEGVRRLAGD	
SEQ ID NO: 43	QIQTYLEHNEGAGLQHLALMSEDI FRTLREMRKRSSIGGDFMPSPPTTYQNLIKRVGD	
SEQ ID NO: 42	QIQTYLEHNEGAGVQHIALVSEDI FRTLREMRKRSCLCGFEFMPSPPTTYKNLKNRVGD	
SEQ ID NO: 36	QIETYLEHNEGAGVQHIALVTHDI FTTLREMRKRSLGCGFEFMPSPPTTYANLHNRAAD	
SEQ ID NO: 38	QIQTFLEHHGGSGVQHIAVASSDVLRTLREMRARSAMGGFDLPPPLPKYYEGVRR IAGD	
SEQ ID NO: 32	QIQTYLEHNEGPGVQHIALVSEDI FNTLREMRKRSGVGGFEFMPSPPLTTYKNLKNRAGD	301
		360



RECEIVED  
NOV 19 2003  
TECH CENTER 1600/2900

FIGURE 2C

SEQ ID NO: 41 VLSEAQIKECQELGVLVDRDDQGVLQIFTKPVGDRPTLFLEMIQIRIGCMKDERGEEYQ  
SEQ ID NO: 43 VLSDDQIKECCEELGILVDRDDQGTLQIFTKPLGDRPTIFIEIIQRVGCMKDEEGKAYQ  
SEQ ID NO: 42 VLSDEQIKECEDLGILVDRDDQGTLQIFTKPVGDRPTLFIEIIQRVGCMKDDAGQMYQ  
SEQ ID NO: 36 VLTVDQIKQCEELGILVDRDDQGTLQIFTKPVGDRPTIFIEIIQIRIGCMVEDEEGKVYQ  
SEQ ID NO: 38 VLSEAQIKECQELGVLVDRDDQGVLQIFTKPVGDRPTLFLEMIQIRIGCMKDERGEEYQ  
SEQ ID NO: 32 VLRDEQIEECEKLGILVDRDDQGTLQIFTKPVGDRPTLFIEIIQIRIGCMKDEQGKLYQ  
361 420

SEQ ID NO: 41 KGGCGGFGKGNFSELFKSIEDYEKSLKQSAAVQG-S  
SEQ ID NO: 43 SGGCGGFGKGNFSELFKSIIEYEKTLKQVLG-----  
SEQ ID NO: 42 KGGCGGFGKGNFSELFKSIIEYEKTLKQITGSA-AA  
SEQ ID NO: 36 KGACGGFGKGNFSELFKSIIEYEKTLKQ-----TA.  
SEQ ID NO: 38 KGGCGGFGKGNFSELFKSIEDYEKSLKQSAAVQGS.  
SEQ ID NO: 32 KSGCGGFGKGNFSELFKSIIEYEKMLKQVTETASA.  
421 458